

REMARKS

The above-described amendments to the Specification, Abstract, and Claims correct informalities.

The Examiner is invited to contact the undersigned if a telephone interview would expedite prosecution.

Respectfully submitted,

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## APPENDIX

### Clean Copy Of Amended Claims

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1 (Amended). Method of processing  $X$  streams of information symbols to be  
2 transmitted on  $Y$  communication channels,  $X$  and  $Y$  being positive integers, wherein the  $Y$   
3 communication channels simultaneously occupy a transmission resource organized as  
4 successive frames, wherein the successive frames include compressed-mode frames each  
5 having at least one inactive period during which no symbol is transmitted, wherein the  
6 information symbols of each stream  $i$  ( $1 \leq i \leq X$ ) are transmitted in successive transmission  
7 time intervals each comprising  $F_i$  consecutive frames,  $F_i$  being a positive integer, and wherein,  
8 for each transmission time interval relating to a stream  $i$  ( $1 \leq i \leq X$ ), integers  $E_i$ ,  $\Delta N_i^{\text{TPI}}$  and  
9  $\Delta N_i^{\text{CM}}$  are defined such that  $E_i > 0$ ,  $\Delta N_i^{\text{CM}} < 0$  if [the] said transmission time interval comprises  
10 at least one compressed mode frame and  $\Delta N_i^{\text{CM}} = 0$  if [the] said transmission time interval does  
11 not comprise any compressed-mode frame, the method comprising the following steps for each  
12 transmission time interval relating to a stream  $i$  ( $1 \leq i \leq X$ ):  
13 forming a first sequence of  $E_i$  coded symbols from information symbols of stream  
14 pertaining to said transmission time interval;  
15 forming a second sequence of symbols including  $E_i + \Delta N_i^{\text{TPI}} + \Delta N_i^{\text{CM}}$  symbols extracted  
16 from the first sequence and  $\Delta N_i^{\text{CM}}$  marked symbols;  
17 forming a third sequence of symbols by a permutation of the symbols of the second  
18 sequence;

19 distributing the symbols of the third sequence into  $F_i$  segments of consecutive symbols,  
20 the  $F_i$  segments being respectively assigned to the frames of said transmission time interval; and  
21 for each frame of said transmission time interval, forming a fourth sequence of symbols  
22 extracted from the segment assigned to said frame, said permutation and the placing of the  
23 marked symbols in the second sequence when said transmission time interval comprises at least  
24 one compressed-mode frame being such that each marked symbol belongs, in the third  
25 sequence, to a segment assigned to a compressed-mode frame, and the following steps for each  
26 frame:  
27 forming a fifth sequence of symbols including the symbols of the fourth sequence  
28 output for said frame in relation to each stream;  
29 distributing the symbols of the fifth sequence into  $Y$  segments of symbols, the  $y$   
30 segments being respectively assigned to the  $Y$  communication channels;  
31 for each communication channel, forming a sixth sequence of symbols extracted from  
32 the segment assigned to said communication channel;  
33 for each communication channel, forming a seventh sequence of symbols by a  
34 permutation of the symbols of the sixth sequence; and  
35 transmitting on each communication channel, in time slots of said frame, symbols  
36 extracted from the seventh sequence, each of said marked symbols being deleted before  
37 transmission on each communication channel when said frame is in compressed mode, so as to  
38 provide said inactive period within the frame.

1 2. (Amended) Method according to Claim 1, wherein said marked symbols are kept  
2 until the seventh sequences when said frame is in compressed mode, without being extracted  
3 from the seventh sequences for transmission.

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1           3.       (Amended) Method according to Claim 1 wherein additional marked symbols  
2       are inserted into the second or the fifth sequence these symbols being kept until the seventh  
3       sequences so as to be transmitted with zero transmission power.

4

1           4.       (Amended) Device for processing X streams of information symbols to be  
2       transmitted on Y communication channels, X and Y being positive integers, the Y  
3       communication channels simultaneously occupying a transmission resource organized as  
4       successive frames, the successive frames including compressed-mode frames each having at  
5       least one inactive period during which no symbol is transmitted, the information symbols of  
6       each stream  $i$  ( $1 \leq i \leq X$ ) being transmitted in successive transmission time intervals each  
7       comprising  $F_i$  consecutive frames,  $F_i$  being a positive integer, integers  $E_i$ ,  $\Delta N_i^{TTI}$  and  $\Delta N_i^{CM}$   
8       being defined for each transmission time interval relating to a stream  $i$  ( $1 \leq i \leq X$ ), with  $E_i > 0$ ,  
9        $\Delta N_i^{CM} < 0$  if said transmission time interval comprises at least one compressed-mode frame and  
10        $\Delta N_i^{CM} = 0$  if said transmission time interval does not comprise any compressed-mode frame, the  
11       device comprising:

12               means for forming a first sequence of  $E_i$  coded symbols from information symbols of  
13       each stream  $i$  ( $1 \leq i \leq X$ ) pertaining to a transmission time interval;

14               means for forming, for each transmission time interval relating to a stream  $i$  ( $1 \leq i \leq X$ ),  
15       a second sequence of symbols including  $E_i + \Delta N_i^{TTI} + \Delta N_i^{CM}$  symbols extracted from the first  
16       sequence and  $\Delta N_i^{CM}$  marked symbols;

17 means for forming a third sequence of symbols by a first permutation of the symbols of  
18 each second sequence;  
19 means for distributing the symbols of each third sequence, formed for a transmission  
20 time interval relating to a stream  $i$  ( $1 \leq i \leq X$ ), into  $F_i$  segments of consecutive symbols  
21 respectively assigned to the frames of said transmission time interval, and for forming  $F_i$  fourth  
22 sequences of symbols respectively extracted from the segments assigned to said frames;  
23 means for forming, for each frame, a fifth sequence of symbols including the symbols of  
24 the fourth sequence output for said frame in relation to each stream  $i$  ( $1 \leq i \leq X$ );  
25 means for distributing the symbols of each fifth sequence into  $Y$  segments of symbols  
26 respectively assigned to the  $Y$  communication channels;  
27 means for forming a sixth sequence of symbols extracted from the segment assigned to  
28 each communication channel; and  
29 means for forming a seventh sequence of symbols by a second permutation of the  
30 symbols of each sixth sequence, and for transmitting, in time slots of each frame on each  
31 communication channel, symbols extracted from the seventh sequence, wherein the first  
32 permutation and the placing of the marked symbols in the second sequence, formed for a  
33 transmission time interval relating to a stream when said transmission time interval comprises  
34 at least one compressed-mode frame, are such that each marked symbol belongs, in the third  
35 sequence formed for said transmission time interval, to a segment assigned to a compressed-  
36 mode frame, each of said marked symbols being deleted before transmission on each  
37 communication channel so as to provide said inactive period within the frame.

1           5.       (Amended) Device according to Claim 4, wherein the means for forming the  
2   third, fourth, fifth, sixth and seventh sequences of symbols are arranged to keep the said marked  
3   symbols until the seventh sequences formed for each compressed-mode frame, whereby said  
4   marked symbols are not extracted from the seventh sequences for transmission.

1           6.       (Amended) Device according to Claim 4 comprising means for inserting, into  
2   the second or fifth sequences, additional marked symbols which are kept until the seventh  
3   sequences so as to be transmitted with zero transmission power.

1           8.       (Amended) Method of processing Y digital streams obtained from a received  
2   signal and comprising estimates of information symbols respectively transmitted along Y  
3   communication channels simultaneously occupying a transmission resource organized as  
4   successive frames, and pertaining to X transport channels, X and Y being positive integers,  
5   wherein the successive frames include compressed mode frames each having at least one  
6   inactive period during which no symbol is transmitted, and wherein the estimates of  
7   information symbols pertaining to each transport channel  $i$  ( $1 \leq i \leq X$ ) are received in  
8   successive transmission time intervals each comprising  $F_i$  consecutive frames,  $F_i$  being a  
9   positive integer, the method comprising the following steps for each frame:  
10       forming, in relation to each communication channel  $j$  ( $1 \leq j \leq Y$ ), a first sequence  
11   composed of estimates extracted from the time slots of said frame and, when said frame is in  
12   compressed mode, of marked estimates placed at positions corresponding to the inactive period  
13   of said frame;

14 for each communication channel, forming a second sequence of estimates by a  
15 permutation of the estimates of the first sequence;  
16 forming a third sequence of estimates including estimates of the second sequence output  
17 for each communication channel; and  
18 distributing the estimates of the third sequence into X segments of consecutive  
19 estimates, the X segments being respectively assigned to the X transport channels, and the  
20 following steps for each transmission time interval relating to a transport channel:  
21 forming a fourth sequence by concatenating the respective segments assigned to said  
22 transport channel for the frames of said transmission time interval;  
23 permuting the estimates of the fourth sequence and forming a fifth sequence of  
24 estimates extracted from the permuted fourth sequence;  
25 ignoring each marked estimate of the fifth sequence, and forming a sixth sequence of  
26 symbols on the basis of the other estimates of the fifth sequence; and  
27 decoding the sixth sequence of estimates and outputting the decoded estimates.

28  
1 9. (Amended) Method according to Claim 8, wherein the step of forming the third  
2 sequence for at least one frame comprises concatenating the second sequences formed for the Y  
3 communication channels and deleting at least one estimate having a determined position in the  
4 concatenated sequence.

5  
1 10. (Amended) Method according to Claim 8, wherein the step of the fifth sequence  
2 for at least one transmission time interval relating to a transport channel comprises deleting at  
3 least one estimate having a determined position in the permuted fourth sequence.

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1 11. (Amended). Device for processing Y digital streams obtained from a received  
2 signal and comprising estimates of information symbols respectively transmitted along Y  
3 communication channels simultaneously occupying a transmission resource organized as  
4 successive frames, and pertaining to X transport channels, X and Y being positive integers, the  
5 successive frames including compressed-mode frames each having at least one inactive period  
6 during which no symbol is transmitted, and the estimates of information symbols pertaining to  
7 each transport channel  $i$  ( $1 \leq i \leq X$ ) being received in successive transmission time intervals  
8 each comprising  $F_i$  consecutive frames,  $F_i$  being a positive integer, the device comprising:

9 means for forming, for each frame in relation to each communication channel, a first  
10 sequence composed of estimates extracted from the time slots of said frame and, when said  
11 frame is in compressed mode, marked estimates placed at positions corresponding to the  
12 inactive period of said frame;

13 means for forming, for each frame in relation to each communication channel, a second  
14 sequence of estimates by permutation of the estimates of the first sequence;

15 means for forming, for each frame, a third sequence of estimates including estimates of  
16 the second sequence output for each communication channel;

17 means for distributing the estimates of the third sequence formed for each frame into X  
18 segments of consecutive estimates, the X segments being respectively assigned to the X  
19 transport channels;



20 means for forming a fourth sequence for each transmission time interval relating to a  
21 transport channel, by concatenating the respective segments assigned to said transport channel  
22 for the frames of said transmission time interval;

23 means for permuting the estimates of the fourth sequence formed for each transmission  
24 time interval relating to a transport channel, and for forming a fifth sequence of estimates  
25 extracted from the fourth permuted sequence;

26 means for deleting each marked estimate of the fifth sequence formed for each  
27 transmission time interval relating to a transport channel, and for forming a sixth sequence of  
28 symbols on the basis of the other estimates of the fifth sequence; and

29 means for decoding the sixth sequence of estimates formed for each transmission time  
30 interval relating to a transport channel, to output the decoded estimates.

31  
1 12 (Amended) Device according to Claim 11, wherein the means for forming the  
2 third sequence of estimates comprise means for concatenating the second sequences formed for  
3 the Y communication channels and means for deleting at least one estimate having a  
4 determined position in the concatenated sequence.

1           13.    (Amended) Device according to Claim 11, wherein the means for forming the  
2 fifth sequence comprise means for deleting at least one estimate having a determined position.  
3 in the permuted fourth sequence.--

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